

<b>Notice of Allowability</b>	Application No.	Applicant(s)	
	10/677,532	KIM ET AL.	
	Examiner	Art Unit	
	Dismary E. Mercedes	2651	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--**

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to A.F.amdt filed 1/13/2006.
2. ☒ The allowed claim(s) is/are 1-8 and 10-13.
3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☒ All    b) ☐ Some\*    c) ☐ None    of the:
  1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS ( as "replacement sheets") must be submitted.
  - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review ( PTO-948) attached
    - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
  - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

- |   |  |
|---|--|
| 1. <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 5. <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)            |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                | 6. <input type="checkbox"/> Interview Summary (PTO-413),<br>Paper No./Mail Date _____. |
| 3. <input type="checkbox"/> Information Disclosure Statements (PTO-1449 or PTO/SB/08),<br>Paper No./Mail Date _____ | 7. <input type="checkbox"/> Examiner's Amendment/Comment                               |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit<br>of Biological Material          | 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance   |
|   | 9. <input type="checkbox"/> Other _____.   |

### DETAILED ACTION

1. Applicant's amendment filed 1/13/2006 has been considered and made of record.

#### *Allowable Subject Matter*

2. Claims 1-8, 10-13 are allowed.
3. The following is an examiner's statement of reasons for allowance:

Independent Claim 1 is allowable over the Prior Art of Record since the cited references, in particular, Suzuki et al. (US 6,650,491 B1); Smith et al. (US 6,078,461); Suzuki et al. (US 5,455,724), taken alone or in combination do not teach or suggest: *"extracting and measuring read gain characteristics while gradually varying an off-track amount in both a positive direction and a negative direction off of a centerline of a desired track; measuring an off-track amount at a place where the read error has occurred, based upon the measured read gain characteristics; reading data using the measured off-track amount"*

Independent Claim 8, is allowable over the Prior Art of Record since the cited references, in particular, Suzuki et al. (US 6,650,491 B1); Smith et al. (US 6,078,461); Suzuki et al. (US 5,455,724), taken alone or in combination do not teach or suggest: *wherein the measuring the off-track amount at a location wherein a read error occurs comprises: extracting read gain characteristics while varying the off-track amount in a positive direction and a negative direction off of a centerline of a desired track; and determining an off-track direction and a degree based upon the read gain characteristics.*

Independent Claim 11, is allowable over the Prior Art of Record since the cited references, in particular, Suzuki et al. (US 6,650,491 B1); Smith et al. (US 6,078,461); Suzuki et al. (US 5,455,724), taken alone or in combination do not teach or suggest: *determining an off-track direction and an off-track amount at a place where the read error has occurred and at the same time by measuring read gains at different places while gradually varying the off-track amount within a predetermined off-track range in both a positive*

Art Unit: 2651

*direction and a negative direction off of a centerline of a desired track; reading data using the determined off-track direction and the off-track amount.*

Independent Claim 13, is allowable over the Prior Art of Record since the cited references, in particular, Suzuki et al. (US 6,650,491 B1); Smith et al. (US 6,078,461); Suzuki et al. (US 5,455,724), taken alone or in combination do not teach or suggest: *obtaining an off-track amount at a place where the read error has occurred by measuring a read gain at three points; reading the data using the off-track amount obtained; determining whether the read data is normal; and determining whether the data incorrectly read due to the read error has been recovered; wherein the obtaining the off-track amount by measuring a read gain at three points comprises: measuring the read gain at a centerline of a track; measuring the read gains at a first point and a second point on either side of the centerline of the track; determining an off-track direction based upon a gradient of a curve of the measured read gains; re-measuring the read gains while varying the off-track amount in a predetermined off-track range; differentiating the measured read gains; and determining the off-track amount based upon a maximum value of the result of the differentiation.*

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

### ***Conclusion***

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure: Suzuki et al. (US 6,650,491 B1); Smith et al. (US 6,078,461); Suzuki et al. (US 5,455,724); Smith (US 5,612,845); Brunnett et al. (US 6,882,489 B1); Codilian (US 6,781,780 B1); Le et al. (US 6,008,962); Fung et al. (US 5,353,170); Tsuwako et al. (US 5,696,643); Mukohara (US 5,936,789) ; Suzuki et al. (US 5,521,773).


Art Unit: 2651

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dismery E. Mercedes whose telephone number is 571-272-7558. The examiner can normally be reached on Monday - Friday, from 9:00am - 4:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Hudspeth can be reached on 571-272-7843. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

DM



DAVID HUDSPETH  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2600